AMENDMENT

Please amend the application as follows:

In the specification:

Please replace the paragraph beginning at page 5, line 24, submitted in a Preliminary Amendment on May 7, 2001, with the following rewritten paragraph:

-- Figure 5 shows aligned amino acid sequences (SEQ ID NOs: 2, 5-8) of five β-glycosidases from hyperthermophilic archaea. The abbreviations of the sources of the enzymes are: BGPh, β-glycosidase from P. horikoshii (SEQ ID NO: 2); BMPh, a β-mannosidase gene homolog from P. horikoshii (8,9)(SEQ ID NO: 5); BGPf, β-glucosidase from P. furiosus (17)(SEQ ID NO: 6); BMPf, β-mannosidase from P. furiosus (17)(SEQ ID NO: 7); S β-gly, β-glycosidase from Sulfolobus solfataricus (18)(SEQ ID NO: 8); and the Consensus sequence (SEQ ID NO: 9). The conserved residues, identified automatically by the GeneWorks program, are shown in the open boxes. The reversed open triangles indicate the location of the nucleophile (E324) and the putative acid/base catalyst (E155 and H111) with R75 in the spatial proximity of the nucleophile of BGPh. The arrow shows the prominent deletion of more than 30 residues found in BGPh. --

C1

In the claims:

Please cancel claims 1-2 and 12-13.

Please add claims 14-27.

-- 14. A method for using a thermophilic enzyme as a β-glycosidase, comprising:
providing an enzyme, wherein the enzyme comprises SEQ ID NO:2 and the enzyme forms a tetramer, in which each subunit of the tetramer comprises the amino acid residues of SEQ ID NO:2; and
contacting the enzyme with a substrate, under conditions, wherein the enzyme functions as a β-glycosidase on the substrate.

C2